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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/670,490	09/26/2000	Ting Sun	PA1203	4334
7590	09/03/2004		EXAMINER	
Jim H. Salter Blakely, Sokoloff, Taylor and Zafman LLP 1279 Oakmead Parkway Sunnyvale, CA 94085			TRAN, KHAI	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 09/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/670,490

Applicant(s)

SUN, TING

Examiner

KHAI TRAN

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11, 12, 15, 16 is/are allowed.
- 6) ☒ Claim(s) 6-9, 13, 14, 20 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment A filed 6/15/04 has been entered. Claims 1-5, 10, 17-19, 21 have been canceled. Claims 6-9, 11-16, 20 and 22 are pending in this Office action.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 6-9, 13, 14, 20, 22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nabicht et al (U.S. Pat. 6,621,346).

Regarding claim 6, Nabicht et al also disclose a step of decreasing (attenuating) downstream DSL signal before the downstream DSL signal enters the amplifier circuit (col. 1, lines 19-40, the programmability of the gain of the amplifier permits adjustment of the amplifier operating characteristics according to the amplitude of the input signals being received thereby over time). Nabicht et al does not explicitly disclose the amplitude of the downstream DSL signal being above a predetermined threshold.

Nabicht et al disclose a method for adaptively adjusting DSL modem receiver in response to a high amplitude downstream DSL signal, comprising step of: determining whether the amplitude of the downstream DSL signal is above a predetermined threshold (col. 1, lines 19-40, a programmable gain amplifiers are particularly useful in the amplification of input signals that may be received over a wide dynamic range). Nabicht et al does not explicitly disclose the amplitude of the downstream DSL signal

being above a predetermined threshold. However; Nabicht et al disclose in col. 1, lines 28-40 that many communication systems are operable according to multiple standards or protocols, such that the specified range and characteristics of the input signals may vary widely among the standards; in such systems, it is useful to have a programmable gain amplifier for receiving and amplifying the input signals, such that the gain of the amplifier may be programmably adjusted according to the desired standards.

Therefore, it would have been obvious to one having ordinary skill in the art at the time invention was made to determine whether the amplitude of the downstream DSL signal is above a predetermined threshold (the desired standard) in order to enable the programmable gain amplifier to adjust the gain of the DSL modem receiver for reducing error signals.

Regarding claims 7, 9, Nabicht et al disclose also wherein the step of decreasing further comprises switching in additional resistance in a receiver amplifier to decrease the gain of the receiver (the programmable gain amplifier including resistors RA, RB, RC, and switches G1, G2). Nabicht et al further disclose the step of determining being performed by a digital signal processor (a programmable gain amplifier and a digital transceiver function 10 is preferably implement as a high-performance digital signal processor (DSP), col. 5, line 60 to col. 6, line 3)).

Regarding claim 8, Nabicht et al fail to explicit disclose the step of decreasing further comprising the receiver gain by 3dB to 12dB (col. 8, lines 43-53). Nabicht et al disclose that the programmable gain amplifier amplifies the incoming signal according to one of several finely-adjustable levels, for example from 0dB to 3dB in 1dB steps.

Therefore, the step of decreasing gain by 3dB to 12dB in order to receive an optimal signal or a desired standard.

Regarding claim 13, Nabicht et al fail to disclose a loss circuit coupled to and controlled by the data processor for attenuating the downstream signal in response to the data processor detecting a high amplitude downstream DSL signal. However; Nabicht et al disclose the step of detecting the amplitude of the downstream DSL signal being performed by a digital signal processor (a programmable gain amplifier and a digital transceiver function 10 is preferably implement as a high-performance digital signal processor (DSP), col. 5, line 60 to col. 6, line 3)). Therefore, the function of programmable gain amplifier is similar to the function of the passive loss circuit; claim 13 is therefore rejected under a similar rationale.

Regarding claim 14, Nabicht et al disclose the loss circuit being disposed within the first stage receiver to selectively attenuate the downstream DSL signal before the amplifier circuit amplifies the downstream DSL signal (col. 9, line 31 to col. 10, line 60, such that if switch S23 is closed and switches S3X, S12 are open ...).

Claims 20 and 22 are similar to claims 6, 13. Therefore, claims 20 and 22 are rejected under a similar rationale.

Allowable Subject Matter

4. Claims 11-12, 15, 16 are allowed.
5. The following is a statement of reasons for the indication of allowable subject matter: Nabicht et al fail to disclose the first automatically adjustable DSL modem

wherein the first stage receiver comprising: a pair of amplifier circuits, each amplifier circuit including a switching device coupled and controlled by the data processor for selectively switching in additional resistance to decrease the gain of the amplifier circuit in response to detection of a high amplitude downstream DSL signal.

Response to Arguments

6. Applicant's arguments filed 6/15/04 have been fully considered but they are not persuasive.

The argument has been addressed and illustrated in paragraph 3 above.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAU TRAN whose telephone number is (571) 272-3019. The examiner can normally be reached on 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JAY PATEL can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KHAI TRAN
Primary Examiner
Art Unit 2637

KT
September 2, 2004